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TRANSACTIONS, PROCEEDINGS, AND ABSTRACTS.

1909.

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 Catalase.
 Catecholase.
 Diastases.
 Emulsin.
 Enterokinase.
 α -Glucosidase.
 Hemolysin.
 Hydrogenase.
 β -Hydroxybutyrase.
 Indimulsin.
 Invertase.
 Laccase.
 Lactase.
 Lipase.
 Maltase.
 Malt diastase.

Enzymes. See also:—

Manninotriase.
Pepsin.
Peroxydase.
Populase.
Reductase.
Salicase.
Saligenolase.
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- Phenyl- β -dimethylpentylthiocarbamide** (CHONIN), A., i, 450.
- β -Phenyl- $\alpha\alpha$ -dimethylpropionic acid** and its amide, and nitro-derivative (HALLER and BAUER), A., i, 655.
- 1-Phenyl-4:4-dimethyl-3:5-pyrazolid-one**, 3-benzoyl and 3-benzene-sulphonyl derivatives (MICHAELIS and SCHENK), A., i, 58.
- 1-Phenyl-2:3-dimethyl-5-pyrazolone**. See Antipyrine.
- 1-Phenyl-4:4-dimethylpyrazolone-3-carboxylic acid**, ethyl ester (RASSOW and BAUER), A., i, 632.
- α -Phenyl-5-(4:6-dimethyl-2-pyridyl)butadiene** and its aurichloride (PROSKE), A., i, 413.
- 3-Phenyl-2:6-dimethyl-4-quinazolone**, 7-acetyl-amino- (BOGERT and KROPPF), A., i, 843.
- 1-Phenyl-3:4-dimethyl-1:2:5-triazole**, amino- (v. PECHMANN and BAUER), A., i, 271.
- nitro- (v. PECHMANN and BAUER), A., i, 271.
- α -Phenyl- β -*o*-diphenylmethanethiocarbamide** (CARRÉ), A., i, 122.
- Phenylene** 1:4-*di*trichloromethylsulphoxide (ZINCKE and FROHNEBERG), A., i, 644.
- 1:4-dimethyl*disulphoxide* (ZINCKE and FROHNEBERG), A., i, 643.
- o*-Phenyleneacetic-glycollic acid** and its ethyl ester (CZAPLICKI, v. KOSTANECKI, and LAMPE), A., i, 235.
- o*-Phenyleneacetic-mandelic acid** and its ethyl hydrogen, and diethyl esters (CZAPLICKI, v. KOSTANECKI, and LAMPE), A., i, 235.

- p*-Phenylenebis-1-amino-2-hydroxy- and 2-methyl-anthraquinones (LAUBÉ and KÖNIG), A., i, 55.
- o*-Phenylenebis-1-amino-2-methyl-anthraquinone, *p*-nitro- (LAUBÉ and KÖNIG), A., i, 55.
- p*-Phenylenebisiminocamphor (FORSTER and THORNLEY), T., 955.
- m*-Phenylenediamine, 2:4:6-*tr*initro-, diacetyl derivative (BLANKSMA), A., i, 780.
- p*-Phenylenediamine, preparation of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 256.
hydroxy-, and its unsymmetrical dialkyl derivatives, oxidation of (KEHRMANN and POPLAWSKI), A., i, 516.
- p*-Phenylenediaminesulphonic acid, preparation of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 256, 257.
- 1:4-Phenylenediamine-2-thiolacetic acid, 5-chloro-, sodium salt (KALLE & Co.), A., i, 736.
- Phenylene-1:4-dimethyldisulphone (ZINCKE and FROHNEBERG), A., i, 643.
- o*-Phenylene- $\beta\beta$ -naphthylene ketone and its phenylhydrazone (THIELE and SCHNEIDER), A., i, 929.
- α -Phenylethane, β -chloro- α -3:4-*tri*hydroxy- (BÖTTCHER), A., i, 153; (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 569.
 β -bromo- α -3:4-*tri*hydroxy-, β -bromo- α -3:4-*tri*hydroxybromo-, and α -3:4-*tri*hydroxy- β -methylaminobromo- (BÖTTCHER), A., i, 153.
 α -*p*-*di*hydroxy-, acetyl derivative (TUTIN, CATON, and HANN), T., 2124.
- β -Phenylethane, α -chloro-, and α -chloro-*p*-nitro- (BARGER), T., 2194.
- Phenylethanolamine, *o*-*di*hydroxy-, preparation of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 792.
- Phenylethanolmethylamine, *o*-*di*hydroxy-, preparation of crystalline salts of, and hydrochloride of (FARBWERKE VORM. MEISTER, LUCIUS & BRÜNING), A., i, 229.
- Phenyl ethers, *p*-mono-iodo-, aromatic, derivatives of, with multivalent iodine (WILLGERODT and WIEGAND), A., i, 912.
- Phenylethoxyacetic acid, affinity constant of (FINDLAY, TURNER, and OWEN), T., 939; P., 146.
- Phenyl β -ethoxyethyl ketone, 4-bromo-, and its phenylhydrazone (KÖHLER), A., i, 939.
- s*-Phenylethoxymethylthiocarbamide (JOHNSON and GUEST), A., i, 371.
- α -Phenylethylamine, *p*-hydroxy-, syntheses of (BARGER), T., 1123; P., 162; (BARGER and WALPOLE), T., 1720; P., 229.
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- β -Phenylethylamine picrate (DECKER and KROPP), A., i, 513.
 β -*p*-*di*hydroxy-, and its hydrochloride and di- and tri-benzoyl derivatives (TUTIN, CATON, and HANN), T., 2120; P., 289.
- Phenylethylamines, α -3:4-*tri*hydroxy-, preparation of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 569.
- d*- and *l*- α -Phenylethylamino-*d*-methyl-enecamphor (POPE and READ), T., 172.
- Phenylethylcarbinol, *dib*bromo- (SCHMIDT and GOEHRING), A., i, 322.
- 5-Phenyl-10-ethyl $dihydro$ acridine, 5-cyano- (KAUFMANN, ALBERTINI, and HOLSBOER), A., i, 606.
- N*-Phenyl- α -ethyl $dihydro$ phenanthra-phenazine and its hydrochloride and hydrobromide (FREUND and RICHARD), A., i, 418.
- Phenylethylenecatechol, preparation of (LAZENNEC), A., i, 469.
- s*-Phenylethylhydrazine, hydrochloride and benzoyl derivative of (KNORR and WEIDEL), A., i, 966.
- Phenylethylhydrazinopyrine and its alkyl iodides (MICHAELIS and KOBERT), A., i, 680.
- 1- α -Phenylethylideneamino-1:3:4-*tri*-azole (BÜLOW), A., i, 680.
- Phenylethylmethylamine, synthesis of, and its salts (JOHNSON and GUEST), A., i, 784.
 α -3:4-*tri*hydroxy-, preparation of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 792.
- α -Phenylethyl- α -methylcarbamide (JOHNSON and GUEST), A., i, 785.
- α -Phenylethyl- β -1-naphthylcarbamide (JOHNSON and GUEST), A., i, 785.
- α -Phenylethyl- β -2-naphthyl- α -methylcarbamide (JOHNSON and GUEST), A., i, 785.
- β -Phenyl- α -ethylpropionic acid, resolution of, and *d*-, and its *l*-menthylamine, and metallic salts of (PICKARD and YATES), T., 1018; P., 152.

- 1-Phenyl-4-ethyl-pyrazole, 3:5-dichloro-, -3:5-pyrazolidone** and its dibenzoyl and dibenzesulphonyl derivatives, and **5-pyrazolone, 3-chloro** (MICHAELIS and SCHENK), A., i, 59.
- Phenylethyltrimethylammonium iodide** (JOHNSON and GUEST), A., i, 785.
- tert.-Phenylfenchol** (LEROIDE), A., i, 596.
- α -Phenyl- γ -2-furylpropane- α -y-dione** and its oxime, dioxime, and diacetate (SEMMLER and ASCHER), A., i, 597.
- α -Phenyl- γ -2-furylpropane- α -ol** and its ethyl ether, acetate, chloride and phenylurethane (SEMMLER and ASCHER), A., i, 597.
- α -Phenyl- γ -2-furyl- Δ^{α} -propene**(*dihydro-carlina oxide*) (SEMMLER and ASCHER), A., i, 597.
- Phenylglyceric acid**, fate of, in the animal organism (DAKIN), A., ii, 684.
- Phenyl glycerol ethers, o- and p-chloro-** (EHLÖTZKY), A., i, 786.
- Phenylglycine, dinitrohydroxy-** (REVERDIN and DE LUC), A., i, 914.
- N-Phenylglycine**, derivatives of (FISCHER and GLUUD), A., i, 887.
- Phenylglycinearsenic disulphide**. See under Arsenic.
- Phenylglycine-p-arsinic acid**. See under Arsenic.
- Phenylglycine-2-carboxylic acid, 3:6-dichloro-** (VILLIGER), A., i, 931.
- Phenylglycinenitrile-2-carboxylic acid, 3:6-dichloro-** (VILLIGER), A., i, 931.
- 3-Phenylglycyl-p-cresol** (AUWERS and MÜLLER), A., i, 223.
- Phenylglyoxalhydroxamic acid** (ANGELI and MARCHETTI), A., i, 12.
- Phenylglyoxylic acid** (*benzoylformic acid*), *d*-amyl ester (MCKENZIE and MÜLLER), T., 546.
- p*-bromo-, and its amide (WISLICENUS and ELVERT), A., i, 31.
- 3:4-dihydroxy-** (BARGER and EWINS), T., 560.
- Phenylglyoxylic acid oxime** and its ethyl ester (BORSCHÉ), A., i, 925.
- Phenylglyoxylic acids, o-hydroxy-, and coumarandiones** (FRIES), A., i, 175.
- Phenylguaninoacetic acid** (*glycolyl-phenylguanidine*), nitrate and hydrochloride of (RAMSAY), A., i, 89.
- η -Phenylheptylamine, η -iodo-, hydriodide and picrate of, and η -hydroxy-, and its platinichloride (GABRIEL), A., i, 892.**
- 2-Phenylcyclohexamethyleneimine** and its salts, nitrosamine, and 1-benzene-sulphonyl derivative (GABRIEL), A., i, 494.
- Phenylhydrazideoximecarboxylic acid** and its benzoyl derivative (WIELAND and GMELIN), A., i, 611.
- Phenylhydrazine** and α -halogen aryl derivatives, reactions of (GOLDSCHMIEDT), A., i, 122.
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- Phenylhydrazines**, reduction of azobenzenes to, by ethyl alcohol (PONZIO), A., i, 852.
- β -Phenylhydrazino- β -cinnamerylpropionic acid**, phenylhydrazine salt and its dibromide (RIEDEL and SCHULZ), A., i, 582.
- 4-Phenylhydrazinocoumarin (?) (benzotetronic acid phenylhydrazide ?)** (ANSCHÜTZ, ANSPACH, FRESSENIUS, and CLAUS), A., i, 662.
- 4-Phenylhydrazinocoumarin-3-carboxylic acid**, ethyl ester, and phenylhydrazide (ANSCHÜTZ, ANSPACH, FRESSENIUS, and CLAUS), A., i, 662.
- 4-Phenylhydrazino-2:6-dimethylnicotinic acid**, ethyl ester, methiodide (MICHAELIS and KRIEDEMAYER), A., i, 531.
- Phenylhydrazino-oximinoisooxazolone** (WIELAND and GMELIN), A., i, 611.
- Phenylhydrazinopyrine** and its salts and methiodide (MICHAELIS and KOBERT), A., i, 680.
- Phenylhydrazone**, $C_{18}H_{22}O_4N_2$, of the pentose from inosine (LEVENE and JACOBS), A., i, 540.
- Phenylhydrazones**, phototropy of certain (PADOA), A., i, 676.
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- of unsaturated aldehydes and ketones, transformation of, into pyrazolines (AUWERS and MÜLLER), A., i, 59.

- Phenylhydrazones** of *o*-hydroxyketones, capacity for transformation of acyl derivatives of (AUWERS and DANNEHL), A., i, 441.
- Phenyl- α -hydroxyethyl ketone**, *p*-bromo-, and its acetyl derivative (KÖHLER), A., i, 394.
- Phenylhydroxylamine**, *p*-chloro- (BAMBERGER and BAUDISCH), A., i, 978.
- 1-Phenyl-5-*o*-hydroxyphenyl-3-methylpyrazoline** and its benzoates (AUWERS and MÜLLER), A., i, 59.
- Phenyliminocamphor** and *m*- and *p*-hydroxy-, and *p*-chloro- (FORSTER and THORNLEY), T., 949.
- C*-Phenyliminodiacetic acid**, and its hydrochloride, nitrile, hydrochloride, and diethyl and dimethyl esters and their nitroso-derivatives and copper salt (STADNIKOFF), A., i, 106.
- Phenyliminomalononic acid**, methyl ester (CURTISS and SPENCER), A., i, 764.
- Phenyliminophosphorylbenzamide** (TITHERLEY and WORRALL), T., 1152; P., 150.
- Phenyliminophosphorylphenylbenzamidine** (TITHERLEY and WORRALL), T., 1154; P., 150.
- 2-Phenylindole**, 6-amino-, and its hydrochloride (BORSCHKE), A., i, 233.
- Phenyl-*p*-iodochloride acetate** (WILLGERODT and WIEGAND), A., i, 913.
- as*-Phenyl *p*-iodochloridephenyl ether**, *m*-dinitro- (WILLGERODT and WIEGAND), A., i, 912.
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- as*-Phenyl *p*-iodosophenyl ether**, *m*-dinitro- (WILLGERODT and WIEGAND), A., i, 912.
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- Phenylitaconic acid** and its barium, calcium and silver salts (STOBEE and HORN), A., i, 105.
- γ -Phenylitaconic acid**, configuration of (STOBEE and HORN), A., i, 31.
- Phenylketentriethylum**, chloro- (WEDEKIND and MILLER), A., i, 459.
- Phenylmalonic acid**, 2:4-dinitro-, ethyl ester, silver and sodium derivatives of, and 2:4:6-trinitro-, ethyl ester, potassium, and silver derivatives of, and chromo- and oxygen-esters of (HANTZSCH and PICTON), A., i, 468.
- Phenylmercuriammine salts**. See under Mercury.
- Phenylmethane**, *p*-bromo- ω -bromonitrocyano- (WISLIGENUS and ELVERT), A., i, 31.
- Phenylmethoxyacetic acid**, affinity constant of (FINDLAY, TURNER, and OWEN), T., 938; P., 146.
- Phenyl methoxymethyl ether**, and *p*-nitro- (HOERING and BAUM), A., i, 572.
- 5-Phenyl-10-methylacridinium** hydroxide and salts, 3-amino- and 3-hydroxy-, and their acetyl derivatives (KEHRMANN and STÉPANOFF), A., i, 54.
- Phenylmethylisocamylloxymethylthiocarbamide** (JOHNSON and GUEST), A., i, 371.
- Phenylmethylbenziminazole**, dinitrohydroxy-1-*o*-, *m*-, and *p*-bromo-, and dinitrohydroxy-1-*o*-, *m*-, and *p*-hydroxy-, and their acetyl, nitro-, and sulphonic acid derivatives (MELDOLA and HAY), T., 1040.
- 7-Phenyl-5-methyl-1:2:4:9-benzotetrazole** (4-phenyl-6-methyl-2:3:7:0-diazpyridazine) (BÜLOW and WEBER), A., i, 615.
- 1-Phenyl-2-methyl-3-bromomethyl-4-ethyl-5-pyrazolone** (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 257.
- 3-Phenyl-8-methylisocarbostyryl** (MÜLLER), A., i, 160.
- 2-Phenyl-7-methylcinchoninic acid** (BORSCHKE), A., i, 53.
- 4-Phenyl-3-methylcinnoline** and its platinichloride (STOERMER and FINCKE), A., i, 843.
- 4-Phenyl-3-methylcinnolinic acid** (STOERMER and FINCKE), A., i, 843.
- 3-Phenyl-8-methylisocoumarin** (MÜLLER), A., i, 160.
- 4-Phenyl-6-methyl-2:3:7:0-diazpyridazine**. See 7-Phenyl-5-methyl-1:2:4:9-benzotetrazole.
- 5-Phenyl-10-methyldihydroacridine**, 5-cyano-, platinichloride (KAUFMANN, ALBERTINI, and HOLDSBOER), A., i, 606.
- 2-Phenyl-2-methyldihydroperimidine** (SACHS), A., i, 433.
- N*-Phenyl- α -methyldihydrophenanthra-pheazine** (FREUND and RICHARD, A., i, 418).
- 1-Phenyl-2-methyl-1:2-dihydroisoquinoline** and its platinichloride (FREUND and BODE), A., i, 516.
- Phenyl methyl-diketone**, refraction of (SMEDLEY), T., 218; P., 17.
- p*-bromo-, and its phenylhydrazone and dioxime (KÖHLER), A., i, 394.

- Phenylmethylethylammonium salts**, hydroxy-, optically active (MEISENHEIMER), A., i, 20.
- Phenylmethylethyl-(ethylanilinoethyl)-ammonium iodide** (WEDEKIND and MEYER), A., i, 186.
- Phenylmethylethylmorpholonedimethylammonium bromide and hydroxide** (FOURNEAU), A., i, 50.
- Phenylmethylethylisopropyl-, butyl- and iso-butyl-ammonium iodides** (FRÖHLICH), A., i, 376.
- 2-Phenyl-1-methyl- Δ^2 -cyclohexene** (MURAT), A., i, 147.
- s-Phenylmethylhydrazine** from phenylpyrazole, and salts of (KNORR and WEIDEL), A., i, 965.
- pierazide** (KNORR and WEIDEL), A., i, 965.
- Phenylmethylhydrazinopyrine** and its salts and methiodide, ethiodide, and benzoyl chloride additive compound (MICHAELIS and KOBERT), A., i, 680.
- 1-Phenyl-2-methyl-3-hydroxymethyl-4-ethyl-5-pyrazolone** (FARBWERKE VORM. MEISTER, LUCIUS, & BRUNING), A., i, 257.
- s-C-Phenyl-C-methyliminodiacetic acid**, and its hydrochloride, nitrile hydrochloride, and diethyl ester (STADNIKOFF), A., i, 106.
- Phenylmethylketazine**, *m*-amino-, and *m*-nitro- (KNÖPFER), A., i, 188.
- 2-Phenyl-3-methyl- β -naphthaquinoline** and its nitrate (BORSCHKE), A., i, 956.
- 2-Phenyl-3-methyl- β -naphthaquinoline-1-carboxylic acid** (BORSCHKE), A., i, 956.
- 3-Phenyl-5-methylisooxazole-4-carboxylic acid** and its ethyl ester (BENARY), A., i, 890.
- β -Phenyl- γ -methylpentan- β -ol** (BODROUX and TABOURY), A., i, 546.
- β -Phenyl- α -methylpropionic acid**, resolution of (PICKARD and YATES), T., 1019; P., 152.
- menthyl ester** (RUPE and BUSOLT), A., i, 927.
- 1-Phenyl-3-methylpyrazole**, 5-amino-, and its hydrochloride and platinichloride, and its 5-azo- β -naphthol compound, and 4-nitro-5-amino- (MOHR), A., i, 190.
- 1-Phenyl-5-methylpyrazole-4-carboxylic acid**, anilide, *p*-toluidide, and α - and β -naphthylamides of (DAINS and BROWN), A., i, 783.
- 1-Phenyl-3-methyl-5-pyrazolone** condensation product of phenylazoimide with, constitution, and derivatives of (HEIDUSCHKA and ROTHACKER), A., i, 851.
- 1-Phenyl-3-methylpyrazolone**, 4-oximino-, benzoyl and *m*-nitrobenzoyl derivatives of (DIMROTH and DIENSTBACH), A., i, 63.
- 1-Phenyl-2-methyl-3:4-pyrazopyrazol-5-one** and its acetyl derivative (STOLZ), A., i, 71.
- 1-Phenyl-3-methyl-4:5-pyrazoquinone**, 5-imino- (MOHR), A., i, 191.
- 1-Phenyl-3-methyl-4:5-pyrazoquinonediaxime anhydride** (MOHR), A., i, 191.
- α -Phenyl-5-(6-methyl-4-pyridyl)butadiene and its salts** (PROSKE), A., i, 413.
- 3-Phenyl-2-methyl-4-quinazolone-6-carboxylic acid**, 7-nitro- (BOGERT and KROPFF), A., i, 843.
- 3-Phenyl-8-methylisoquinoline**, and its salts, and 1-chloro- (MÜLLER), A., i, 160.
- Phenyl methyl sulphoxide**, *p*-acetyl-amino- (ZINCKE and JÖRG), A., i, 790.
- 1-Phenyl-2-methyltetrahydroisoquinoline** and its methiodide (FREUND and BODE), A., i, 516.
- Phenyl methyl thioether dibromide**, *p*-acetyl-amino-, and its hydrobromide, *m*-chloro-*p*-acetyl-amino-, and its hydrochloride, and acetyl derivative, and *m*-bromo-*p*-acetyl-amino- (ZINCKE and JÖRG), A., i, 790.
- 3-Phenyl-6-methyl-2-thio-1:2:3:4-tetrahydroquinazoline** and its platinichlorides (SENIER and SHEPHEARD), T., 499.
- Phenyl methylundecyl ketone** (HALLER and BAUER), A., i, 655.
- 1-Phenyl-naphthalene-2:3-dicarboxylic anhydride**, fluorescence of, in different solvents (STOBBE), A., ii, 282.
- 2-Phenyl-naphthapyronium ferrichloride**, and carbinol derivative (DECKER and v. FELLEBERG), A., i, 117.
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- 2-Phenyl-1:3-naphthylenediamine**, methyl derivatives of (BEST and THORPE), T., 261; P., 28.
- Phenyl-1:8-naphthyleneguanidine** and its picrate (SACHS), A., i, 431.
- Phenyl α -naphthyl ketone**, compound with sodamide (LUCAS), A., i, 489.
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- Phenyl- β -naphthyltartramide** (TINGLE and BATES), A., i, 910.

- Phenylisonitroacetamide**, sodium derivative (VAN PESKI), A., i, 647.
- Phenylisonitroacetoneitrile**, saponification of, to the amide by hydrogen peroxide (VAN PESKI), A., i, 647.
- p*-bromo-, and its salts (WISLICENUS and ELVERT), A., i, 29.
- Phenylnitroamine**, *dichloro-p*-nitro-, and its thorium salt (WITT), A., i, 856.
- N*-Phenyl-*o*-nitrobenzaldehyde** (BECKMANN, EBERT, NETSCHER, and SCHULZ), A., i, 654.
- Phenyl-*m*-nitrobenzylidenehydrazine**, action of amyl nitrite on (BAMBERGER and PEMSEL), A., i, 56.
- α -Phenyl-*p*-nitrocinnamic acid**, *p*-nitro-, and its ethyl ester (BORSCHÉ), A., i, 925.
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- Phenyl-2:4-*d*-nitro- α -naphthylamine** and 2-hydroxy- (ULLMANN and BRUCK), A., i, 22.
- Phenyltrinitrophenylbenzenylamidine**, *o*- and *m*-chloro- (V. WALTHER and GROSSMANN), A., i, 56.
- 3-Phenyl-2-*o*-nitrophenyl- β -naphthaquinoline** (BORSCHÉ), A., i, 957.
- 3-Phenyl-2-*o*-nitrophenyl- β -naphthaquinoline-1-carboxylic acid** (BORSCHÉ), A., i, 956.
- Phenylnitrosohydroxylamine**, *p*-bromo- (BAMBERGER and BAUDISCH), A., i, 909.
- p*-chloro-, and its hydroxylamine, phenylhydrazine, and metallic salts (BAMBERGER and BAUDISCH), A., i, 978.
- Phenyloxazolone**, oximino-, ethyl ester, pyridine, piperidine, tetramethylammonium, and metallic salts of, and its acetate, and benzoate (HANTZSCH and KEMMERICH), A., i, 336.
- Phenylisooxazolone**, indigoid dyes derived from (WAHL), A., i, 261.
- 3-Phenylisooxazolone-2-indole** (WAHL), A., i, 261.
- Phenyloximinoacetic acid**, *p*-bromo- (WISLICENUS and ELVERT), A., i, 30.
- δ -Phenyl- $\Delta\delta$ -pentenoic acid**, menthyl ester (RUPE and MÜNTER), A., i, 928.
- α -Phenyl- $\Delta\delta$ -pentinene- α -ol** and its benzoyl derivative and di-iodide (DUPONT), A., i, 546.
- 2-Phenylperimidine** and its salts (SACHS), A., i, 428.
- o*-, *m*-, and *p*-nitro-, *o*-amino-, and anhydro-compound from, *m*-amino-, and *p*-amino-, and its acetyl derivative (SACHS and STEINER), A., i, 970.
- as*-Phenyl-*p*-phenylene-etherphenyldindium** hydroxide, *m*-dinitro-, and its salts with acids (WILLGERODT and WIEGAND), A., i, 912.
- β -Phenyl- α -phenylethyl- α -methylcarbamide** (JOHNSON and GUEST), A., i, 785.
- β -Phenyl- α -phenylethyl- α -methylthiocarbamide** (JOHNSON and GUEST), A., i, 785.
- Phenylphthalamic acid**, *p*-chloro- (TINGLE and BRENTON), A., i, 799.
- m*-nitro-, salts of, with organic bases (TINGLE and BRENTON), A., i, 799.
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- $C_4H_8N_2Br_4Si$, from acetonitrile and silicon tetrabromide (REYNOLDS), T., 513.
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- $C_6H_{10}O_4S_2$, from sulphur monochloride and silver propionate (DENHAM), T., 1238.
- $C_6H_5O_5N_2Na_3$, from tetraketopiperazine and sodium ethoxide (DE MOULPIED and RULE), T., 551.
- $C_6H_7ON_2Cl_3$, from 4-methylglyoxaline and chloral (GERNGROSS), A., i, 189.
- $C_7H_{10}O_3$, from magnesium ethyl bromide and ethyl mesoxalate, and its semicarbazone (LEMAIRE), A., i, 200.
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- $C_7H_2O_4Br_4$, from methronic acid and bromine (TREPILIEFF and MANGUBI), A., i, 821.
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- $C_8H_{10}O_5N_4$, from hydantoin and formaldehyde (BEHREND and NIEMEYER), A., i, 258.
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- $C_{10}H_{12}O_4$, from cyclohexyl iodide and ethylsodioacetate, and its dibromo-derivative (HELL and SCHAAL), A., i, 593.
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- $C_{10}H_5O_6N_2Na_3$, from tetraketopiperazine and sodium phenoxide (DE MOUILLIED and RULE), T., 551.
- $C_{10}H_6O_3N_2Cl_2$, from 5:6-dichloro-anthranilic diformalide ethyl ether and potassium cyanide (VILLIGER), A., i, 931.
- $C_{10}H_8ON_2S$, from 1:8-naphthylene-diamine and thionyl chloride (SACHS, A., i, 432.
- $C_{10}H_{10}N_2Br_4Si$, from pyridine and silicon tetrabromide (REYNOLDS), T., 513.
- $C_{11}H_{16}O_3$, from oxidation of caryophyllene (HAARMANN), A., i, 401.
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- $C_{11}H_{16}O_2N_2$, from ethyl cyclohexan-2-one-1-carboxylate and piperazine (KÖRTZ and MERKEL), A., i, 158.
- $C_{11}H_{19}O_3N$, from pinene nitrosochloride and sodium methoxide (DEUSSEN and PHILIPP), A., i, 815.
- $C_{12}H_{13}O_3$, from dihydroxylamino-hydrocoumarin and acetone (FRANCESCONI and CUSMANO), A., i, 234.
- $C_{12}H_8ON_2$, from 9-hydroxy-2-methylperimidine hydrochloride (KEHRMANN and ENGELKE), A., i, 151.
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- $C_{12}H_{11}O_8Sb$, from pyrogallol and antimonic acid (BIGINELLI), A., i, 802.
- $C_{12}H_{12}O_3N_2$, from methyl formylsuccinate, aniline, and phenylhydrazine (WISLICENUS, BÖKLEN, and REUTHE), A., i, 11.
- $C_{12}H_{14}ON_2$, from phenol and phenylhydrazine (CIUSA and BERNARDI), A., i, 675.
- $C_{12}H_{18}O_5N$, from substance, $C_{13}H_{17}O_6N$ (from ethylamine and ethyl 6-ethoxycoumalin-3:5-dicarboxylate), and sodium hydroxide (GUTHZEIT and EYSEN), A., i, 674.
- $C_{12}H_{21}O_2N$, from ethyl *n*-butinene- α -carboxylate and piperidine (DUPONT), A., i, 546.
- $C_{12}H_5O_{10}N_2S$, from oxidation of tetranitrophenazothionium hydroxide (BARNETT and SMILES), T., 1261.
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- $C_{12}H_{18}ONBr, H_2O$, from trimethylamine and β -bromopropiophenone, and its aurichloride and platinumchloride (SCHMIDT and GOEHRING), A., i, 322.
- $C_{12}H_{18}O_6NCl_3$, from anhydrochloralurethane and ethyl malonate (DIELS and SEIB), A., i, 886.
- $C_{13}H_{11}O_4N$, from benzophenone and nitric acid (SHUKOFF and KASATKIN), A., i, 398.
- $C_{13}H_{16}ON_2$, from *m*-cresol and phenylhydrazine (CIUSA and BERNARDI), A., i, 675.
- $C_{14}H_{20}O_3$, from oxidation of caryophyllene (HAARMANN), A., i, 400.
- $C_{14}H_{22}O_2$, from ethyl diazoacetate and α -pinene (LOOSE), A., i, 463.
- $C_{14}H_8O_6Cl_6$, from reduction of hemiether of hexachloroethoxy-*o*-quinocatechol, and its tetra-acetyl derivative (JACKSON and KELLEY), A., i, 495.
- $C_{14}H_{10}O_3N_4$, from 1:8-naphthylene-diamine and alloxan (SACHS), A., i, 432.

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$C_{14}H_{10}O_5N$, from 5-aminosalicylic acid and *o*-nitrobenzaldehyde (PUXEDDU), A., i, 720.

$C_{14}H_{10}O_5N_2$, from 6-amino-*m*-hydroxybenzoic acid and *o*-nitrobenzaldehyde, and hydrochloride of, and two isomerides from the *m*- and *p*-aldehydes (PUXEDDU), A., i, 720.

$C_{14}H_{11}O_4N$, from 6-amino-*m*-hydroxybenzoic acid and salicylaldehyde (PUXEDDU), A., i, 720.

from 5-aminosalicylic acid and *p*-hydroxybenzaldehyde (PUXEDDU), A., i, 720.

$C_{14}H_{11}O_5N$, from 5-aminosalicylic acid and catechualdehyde (PUXEDDU), A., i, 721.

$C_{14}H_{13}O_3N$, from β -dinitrodiphenylethane and sodium ethoxide (ANGELI, CASTELLANA, and FERRERO), A., i, 740.

$C_{14}H_{10}O_9N_6$, from hydantoin and formaldehyde (BEHREND and NIEMEYER), A., i, 258.

$C_{14}H_{10}O_4I_2Ag$, from silver benzoate and iodine (BUNGE), A., i, 472.

$C_{14}H_{17}ONBr$, from β -bromopropiophenone and pyridine, and its aurichloride, picrate, and platinichloride (SCHMIDT and GOHRING), A., i, 322.

$C_{14}H_9ONCl_7P$, from action of phosphorus pentachloride on phenylbenzometoxazone, and on benzoylsalicylonitrile (TITHERLEY and HICKS), T., 918.

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$C_{14}H_9O_2NCl_5P$, from action of phosphorus pentachloride or phenylbenzometoxazone, and on benzoylsalicylonitrile (TITHERLEY and HICKS), T., 918.

from phosphorus pentachloride and benzoylsalicylonitrile (TITHERLEY and HICKS), T., 920.

$C_{14}H_{10}O_2NCl_4P$, from phosphorus pentachloride and phenylbenzometoxazone (TITHERLEY and HICKS), T., 919.

$C_{15}H_{12}O_6$, from hydrindoneoxalic acid (3-hydroxy-2-oxalyindene) and acetic anhydride and sulphuric acid (THIELE and SCHNEIDER), A., i, 929.

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$C_{15}H_{24}O$, from oxidation of gurgjun balsam oil, and its semicarbazone (DEUSSEN and PHILIPP), A., i, 815.

$C_{15}H_{11}O_2Cl$, from 7-hydroxy-2-phenylbenzopyryronium chloride (DECKER and v. FELLEBERG), A., i, 117.

$C_{15}H_{11}O_3N_3$, from α -2:4-dinitrophenyl- $\alpha\beta$ -propanedione α -phenylhydrazone and sodium hydroxide (BORSCHKE), A., i, 233.

$C_{15}H_{12}O_2N_2$, m.p. 186°, from benzotronic acid (4-hydroxycoumarin) and phenylhydrazine (ANSCHÜTZ, ANSPACH, FRESSENIUS, and CLAUS), A., i, 662.

m.p. about 120°, from benzotronic acid (4-hydroxycoumarin) and phenylhydrazine (ANSCHÜTZ, ANSPACH, FRESSENIUS, and CLAUS), A., i, 662.

$C_{15}H_{13}O_4N$, from 6-amino-*m*-hydroxybenzoic acid and anisaldehyde (PUXEDDU), A., i, 720.

$C_{15}H_{15}O_5N$, from 6-amino-*m*-hydroxybenzoic acid and vanillaldehyde (PUXEDDU), A., i, 720.

$C_{15}H_{14}O_5N_2$, from substance, $C_{17}H_{17}O_6N$ (from aniline and ethyl 6-ethoxycoumalin-3:5-dicarboxylate) and ammonia (GUTHZEIT and EYSEN), A., i, 675.

$C_{15}H_{11}O_2N$, from reduction of *p*-tolueneazo-*o*-phenetole (JACOBSON and HUBER), A., i, 853.

$C_{15}H_{10}O_3N$, from nitrosohydroxylamino-derivatives of santonin (FRANCESCONI and CUSMANO), A., i, 724.

$C_{16}H_{12}O_4$, from *p*-benzoquinone and 2:3-dihydroxynaphthalene (SIEGMUND), A., i, 109.

$C_{16}H_{14}O_3N$, from anisaldehydeacyanohydrin and hydrogen chloride (MOCOMBE and PARRY), T., 587; P., 95.

$C_{16}H_{14}O_4S_2$, from sulphur monochloride and silver *o*-, *m*-, and *p*-toluates (DENHAM), T., 1239.

$C_{16}H_{14}O_4S_2$, from sulphur monochloride and silver phenylacetate (DENHAM), T., 1239.

$C_{16}H_{14}O_5S$, from oxidation of ester, $C_{16}H_{18}O_5S$, from 3:5-dimethylol-*p*-cresol, sodium hydroxide, and toluenesulphonyl chloride (ULLMANN and BRITTON), A., i, 591.

$C_{16}H_{16}ON_2$, from β -naphthol and phenylhydrazine (CIUBA and BERNARDI), A., i, 675.

- Substance**, $C_{16}H_{22}O_2N_2$, from ethyl 3-amino-1-methylcyclohexane-4-carboxylate (KÖTZ and MERKEL), A., i, 157.
- $C_{17}H_{14}O_2N_2$, from indigotin and magnesium methyl bromide (SACHS and KANTOROWICZ), A., i, 425.
- $C_{17}H_{16}O_2N_4$, from the action of phenylhydrazine on methyl or ethyl formylsuccinate (WISLIGENUS, BÖCKLEN, and REUTHE), A., i, 11.
- $C_{17}H_{18}O_3N_2$, from oxidation of 4:5-diphenylglyoxalone (BILTZ and RIMPEL), A., i, 742.
- $C_{18}H_{12}O_6$, from oxidation of bisdiketohydrindene, and its acetyl and benzoyl derivatives and methyl ether (VOSWINCKEL), A., i, 166.
- $C_{18}H_{14}O_3$, and $C_{18}H_{14}O_4$, from the oxidation of methylcoumaranones (FRIES and FINCK), A., i, 44.
- $C_{18}H_{16}O_6$, from *p*-benzoquinone and catechol (SIEGMUND), A., i, 109.
- $C_{18}H_{20}O_4$, from oxidation of laudanoline (PYMAN), T., 1269.
- $C_{18}H_{26}O$, from cyclohexanone and potassium hydroxide (WALLACH and BEHNKE), A., i, 813.
- $C_{18}H_{32}O_2$, analogue of stearolic acid, from petroselic acid (VONGERICHTEN and KÖHLER), A., i, 454.
- $C_{18}H_{36}O$, from jalap (POWER and ROGERSON), A., i, 819.
- $C_{18}H_{12}O_6N_2$, from oxalyldiacetophenone and nitrous fumes (WIDMAN and VIRGIN), A., i, 656.
- $C_{18}H_{13}O_3N$, from 1-hydroxy-2-naphthaldehyde and anthranilic acid (BEZDZIK and FRIEDLÄNDER), A., i, 416.
- $C_{18}H_{15}O_7N$, from chloroxylinone and hydriodic acid (AULD), T., 967.
- $C_{18}H_{16}O_2N_2$, from indigotin and magnesium ethyl bromide, and its diethyl derivative (SACHS and KANTOROWICZ), A., i, 425.
- $C_{18}H_{16}O_2N_4$, from action of phenylhydrazine on oxidation products of mucic acid (FERRABOSCHI), T., 1249.
- $C_{18}H_{18}O_4N_2$, from oxidation of substance, $C_{18}H_{16}O_2N_2$, from indigotin and magnesium ethyl bromide (SACHS and KANTOROWICZ), A., i, 425.
- $C_{18}H_{22}O_2N_4$, from catechol and phenylhydrazine (CIUSA and BERNARDI), A., i, 676.
- $C_{18}H_{22}O_4N_2$, from hæmopyrrolecarboxylic acid (PILOTY), A., i, 540.
- $C_{18}H_{24}O_4N_2$ (?), from hæmopyrrolecarboxylic acid (PILOTY), A., i, 540.
- Substance**, $C_{18}H_{36}O_7S$, from ricinoleic acid and sulphuric acid (GRÜN and WOLDENBERG), A., i, 284.
- $C_{19}H_{16}O_2N_3$, from 3-amino-2-methyl-4-quinazolone, nitrous acid, and β -naphthol (BOGERT and GORTNER), A., i, 679.
- $C_{19}H_{18}O_2N_2$, from indigotin and magnesium propyl bromide (SACHS and KANTOROWICZ), A., i, 425.
- $C_{19}H_{19}ON$, from 2:3:3:5-tetramethylindolenine, benzoyl chloride, and sodium hydroxide (PLANCHER and CARRASCO), A., i, 959.
- $C_{20}H_{12}O_4$, from *p*-benzoquinone and 1:2-dihydroxynaphthalene (SIEGMUND), A., i, 109.
- $C_{20}H_{17}N_5$, from *N*-hydroxydioxindole and phenylhydrazine (HELLER and SÖLLING), A., i, 184.
- $C_{20}H_{18}O_4Cl_2$, from oxalyl chloride and cinnamaldehyde (STAUDINGER), A., i, 906.
- $C_{20}H_{20}O_2N_2$, from indigotin and magnesium isobutyl bromide (SACHS and KANTOROWICZ), A., i, 425.
- $C_{20}H_{21}O_2N_3$, from lysine (v. BRAUN), A., i, 230.
- $C_{20}H_{24}O_7N_2$, from condensation of ethyl-1-amino-2:5-dimethylpyrrole-3:4-dicarboxylate with dehydracetic acid (BÜLOW and FILCHNER), A., i, 95.
- $C_{20}H_{26}O_4N_4$, from silver salt of pernitrosocamphor (ANGELI, CASTELLANA, and FERRERO), A., i, 739.
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8-Toluidinonaphthylthiocarbamide, *o*-, and *p*- (SACHS), A., i, 432.

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- p-Toluidinomethyleneacetacetanilide** (DAINS and BROWN), A., i, 781.
- o- and m-Toluidinomethyleneacetylacetone** (DAINS and BROWN), A., i, 782.
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- p-Toluidino-d-methylenecamphor**, rotatory power of (POPE and READ), T., 177; P., 19.
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- m-Toluidinomethylenemalonic acid**, ethyl ester, *m*-toluidide of (DAINS and BROWN), A., i, 781.
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- α -p-Toluoyl- β -p-bromophenylhydrazine**, β -nitroso- (GIOVETTI), A., i, 739.
- β -p-Toluoyl- α -p-bromophenylhydrazine** (PONZIO and CHARRIER), A., i, 443.
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- p-Toluoylformic acid**, 3-hydroxy- (FRIES and FINCK), A., i, 44.
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- p-Tolyl acetate**, *o*-benzoylamino- (AUWERS and EISENLOHR), A., i, 916.

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- s-p-Tolylisoamyloxymethylthiocarbamide** (JOHNSON and GUEST), A., i, 371.
- N-m*- and *p*-Tolylanisaldoximes and their hydrogen tri-iodides (BECKMANN, EBERT, NETSCHER, and SCHULZ), A., i, 653.
- Tolylanthraquinone**, 2-chloro-5- and 2-chloro-8-amino- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 940.
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- p-Tolylauramine**, 2-amino- (GRANDMOUGIN and LANG), A., i, 974.
- N-p-Tolylbenzaldehyde** hydrogen pentaiodide (?) (BECKMANN, EBERT, NETSCHER, and SCHULZ), A., i, 654.
- p-Tolylbenzylphthalimide** (TINGLE and BRENTON), A., i, 799.
- m-Tolylboric acid**. See under Boron.
- o-Tolyl-tert.-butyl alcohol** (CARRÉ), A., i, 544.
- m-Tolyl-tert.-butyl alcohol** and its acetyl derivative (CARRÉ), A., i, 544.
- p-Tolylcamphoramides**, α - and β -*cis*- and -*trans*- and imides of (ABATI and DE NOTARIS), A., i, 783.
- 4-p-Tolylcinoline** and its salts (STOERMER and FINCKE), A., i, 843.
- β -p-Tolylcrotonic acid** and its ethyl ester, and metallic salts (MATSCHEVITSCH), A., i, 304.
- Tolyl-diazohydroxylamine-p-toluene**, *o*-, *m*-, and *p*-, and bromo-derivatives (GEBHARD and THOMPSON), T., 772, 1117.
- 5-o-Tolyl-2:4-di-o-methylbenzylpyrimidine**, 6-amino- (BEST and THORPE), T., 266.
- 5-p-Tolyl-2:4-di-p-methylbenzylpyrimidine**, 6-amino-, and its hydrochloride (BEST and THORPE), T., 271.

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- 5-*m*-Tolyl-2:4-di-*m*-methylbenzylpyrimidine**, 6-amino-, and its hydrochloride (BEST and THORPE), T., 268.
- p*-Tolylidimethylpyrazolone**, compound of, with mercuric oxide (EURY), A., i, 57.
- p*-Tolylidimethylsulphonium methyl sulphate** (AUWERS and ARNDT), A., i, 644.
- m*-Tolylenediamine**, action of sulphur on (SCHULTZ and BEYSCHLAG), A., i, 269.
- s*-*p*-Tolylethoxymethylthiocarbamide** (JOHNSON and GUEST), A., i, 371.
- m*-Tolylethyl alcohol**, acetyl derivative of (CARRÉ), A., i, 544.
- tert*-*o*-, and *p*-Tolylfenchol** (LEROIDE), A., i, 596.
- Tolylidenecamphors**, *m*-, and *p*-, preparation of (HALLER and BAUER), A., i, 595.
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